

□ Apparatus for membrane separation of wastewater from food industries

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PI	JP 63104610	A2	19880510	JP 1986-249227	19861020
	JP 05080248	B4	19931108		

AB In reverse osmosis or ultrafiltration of title wastewater, the gas-contg. feed stream is preferably mixed with solid particles (e.g., ion-exchange resins or sand), and the three-phase mixt. from a head tank is then downwardly passed through a pipe, pressurized with air or N in a gas-liq. mixer, and permeating through .gtoreq.1 hollow-fiber membrane modules to obtain clean water. The waste stream from the membrane modules is pumped and upwardly introduced into the head tank. The ion-exchange resin particles are preferably made of polymethyl methacrylate; the hollow-fiber membrane is made of alumina ceramic and has an av. pore diam. of .apprx.0.42 .mu.m and a porosity of .apprx.47%. The scale deposited on the membrane surface can be significantly prevented.